

WHAT IS CLAIMED IS :

1. A storage system for glass offcuts, the storage system being provided for use next to a glass processing line having a loading table, a glass cutting table and a breakout table, the storage system comprising:

a first tilt table comprising:

- a main frame;
- a movable frame pivotally connected to the main frame of the first tilt table, the movable frame being movable between a horizontal position and a substantially vertical position of less than 90 degrees with reference to the horizontal;
- a glass supporting assembly located on an upper side of movable frame of the first tilt table;
- a tilt mechanism connected between the main frame and the movable frame of the first tilt table;
- a conveyor unit mounted on the movable frame of the first tilt table, the conveyor unit being configured and disposed to move the glass offcuts when the movable frame of the first tilt table is at the substantially vertical position;

a second tilt table comprising:

- a main frame;
- a movable frame pivotally connected to the main frame of the second tilt table, the movable frame of the second tilt table being movable between a horizontal position and a substantially vertical position of less than 90 degrees with reference to the horizontal;
- a glass supporting assembly located on an upper side of movable frame of the second tilt table;
- a tilt mechanism connected between the main frame and the movable frame of the second tilt table;
- a conveyor unit connected to the movable frame of the second tilt table, the conveyor unit of the second tilt table being configured

and disposed to move the glass offcuts when the movable frame of the second tilt table is at the substantially vertical position;
 a storage rack positioned between the first tilt table and the second tilt table,
 the storage rack comprising:

- a main frame;
- a plurality of slot dividers defining a plurality of parallel storage slots extending longitudinally within the main frame of the storage rack, the storage slots individually storing the glass offcuts at a substantially vertical position of less than 90 degrees with reference to the horizontal;
- a conveyor unit located under the main frame, the conveyor unit being configured and disposed to move the glass offcuts in and out of the storage rack; and
- a carriage unit located under the main frame, the carriage unit being configured and disposed to transversally displace the main frame of the storage rack with reference to the first and second tilt tables;
 and

means for controlling operations of the first tilt table, the storage rack and the second tilt table;

whereby, in use, the first tilt table receives a glass offcut from the breakout table and sends it to the storage rack, and whereby, in use, the second tilt table receives a previously-stored glass offcut from the storage rack to be directed to the loading table.

2. The storage system according to claim 1, further comprising an intermediary conveyor positioned between the first tilt table and the storage rack.
3. The storage system according to claim 1, wherein the substantially vertical position of the movable frame of the first tilt table, the substantially vertical position of the glass offcuts in the storage slots and the substantially vertical position of the movable frame of the second tilt table are each defining an angle between 85° and 88° with reference to the horizontal.

4. The storage system according to claim 1, wherein the glass supporting assembly of the movable frame of the first tilt table and the glass supporting assembly of the movable frame of the second tilt table comprise a plurality of caster wheels distributed over the upper side.
5. The storage system according to claim 1, wherein the second tilt table comprises at least two transversal horizontal conveyors configured and disposed to support glass offcuts above the movable frame thereof, when at the horizontal position, and convey them transversally to the loading table.
6. The storage system according to claim 1, wherein the conveyor unit of the storage rack comprises:
 - a vertically-movable conveyor frame extending parallel with reference to the storage slots and located under the main frame of the storage rack;
 - a plurality of pulleys mounted on the conveyor frame;
 - a conveyor belt supported by the pulleys;
 - a motor mechanically connected to the conveyor belt; and
 - an actuator configured and disposed to selectively move the conveyor frame between a raised position and a lower position.
7. The storage system according to claim 6, wherein the pulleys of the conveyor unit of the storage rack are configured and disposed to shape the conveyor belt in a zigzag pattern, whereby, in use, an upper portion of the conveyor belt can be raised between lower beam members of the main frame of the storage rack.
8. The storage system according to claim 1, wherein each storage slot has a bottom supporting area being lower than an upper portion of the conveyor unit of the first tilt table when the movable frame of the first tilt table is at the substantially vertical position.
9. The storage system according to claim 8, wherein protector members are provided at the bottom supporting areas of the storage slots.

10. A method of storing a glass offcut next to a glass processing line, the method comprising:
 - receiving the glass offcut from a breakout table;
 - pivoting the glass offcut from a horizontal position to a substantially vertical position of less than 90 degrees with reference to the horizontal;
 - longitudinally conveying the glass offcut, at a substantially vertical position of less than 90 degrees with reference to the horizontal, to an individual storage location; and
 - storing the glass offcut in a substantially vertical position of less than 90 degrees with reference to the horizontal.
11. The method according to claim 10, wherein upon determining that one glass offcut is required from its storage location, the method comprises:
 - longitudinally conveying the glass offcut, at a substantially vertical position of less than 90 degrees with reference to the horizontal, out of the individual storage location;
 - pivoting the glass offcut from a substantially vertical position of less than 90 degrees with reference to the horizontal, to a horizontal position; and
 - conveying the glass offcut to a loading table.
12. The method according to claim 11, wherein the substantially vertical positions define an angle between 85° and 88° with reference to the horizontal.
13. A method of recycling glass offcuts, the method comprising:
 - receiving an individual glass offcut from a breakout table;
 - pivoting the glass offcut from a horizontal position to a substantially vertical position of less than 90 degrees with reference to the horizontal;
 - longitudinally conveying the glass offcut, at a substantially vertical position of less than 90 degrees with reference to the horizontal, to an individual storage location;
 - storing the glass offcut in a substantially vertical position of less than 90 degrees with reference to the horizontal;

upon determining that the glass offcut is required, longitudinally conveying the glass offcut, at a substantially vertical position of less than 90 degrees with reference to the horizontal, out of the individual storage location;

pivoting the glass offcut from a substantially vertical position of less than 90 degrees with reference to the horizontal, to a horizontal position; and conveying the glass offcut to a loading table.

14. The method according to claim 13, wherein the substantially vertical positions define an angle between 85° and 88° with reference to the horizontal.